



THOMAS G. NEWMAN,
EDITOR.

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Flowers.—We acknowledge the receipt of a bouquet of flowers from Mr. J. W. Winder, of New Orleans, La., which came by mail on Feb. 7. With it was two stems of white clover in bloom, the stems being a foot long. This shows what a varied climate we possess—flowers in bloom there while here the land was clad in a mantle of snow and ice, and the thermometer indicating 20° below zero.

Mr. W. T. F. Petty has sent us samples of his new queen shipping-cages. They are 2 1/4 inches by 1 inch high. There are places for the bees and food separately, with an entrance to each in the side, which is covered by a sliding door—the whole weighing less than half-an-ounce. The ventilation is unexcelled, and the whole thing is neat, light, strong and cheap; it can easily be filled with bees and food, and can be sealed up by simply attaching the necessary one-cent stamp. The grain of the wood of the thin top and bottom runs crosswise of the cage, making it very strong and light.

Robert, son of C. H. Lake, of Baltimore, Md., died on Jan. 22, 1887, aged 11 years. This is the third child Mr. Lake has lost within the past two years. He buried his only daughter, aged 12 years, two years ago, and his oldest son a year ago, 21 years old.

Referring to an item on page 87, about another bee-paper for Canada, a correspondent in the *Canadian Bee Journal* says:

I sincerely trust this is a mistake, but if the project is really under serious consideration, I hope the projectors, whoever they may be, may re-consider the matter. Instead of two or more inferior, half-supported bee-journals in Canada, let us have one good one.... Two papers cannot, in my opinion, thrive and succeed.

Now, we can inform our Canadian friends that a **third bee-paper** is projected in Canada—to be called "The International Bee-Master." Of course all cannot prosper—the only possible result is dismal failure and loss to the projectors, as well as to those who subscribe for some of them.

Down-Right Dishonesty.—In the Berryville, Va., *Courier*, we find the following which was sent to us by a correspondent from Maryland:

Recently a bee-keeper of Berryville, Va., sold to a merchant in York, Pa., about 500 pounds of honey. Instead of receiving a check, he received a letter from the merchant's son, saying the honey was almost worthless, and would be sold for what it would bring. Mr. D. promptly took a train for York and dropped into the store he had shipped to. Upon inquiry he found that he was in the presence of the young man who had written the letter which took him to York, and he asked if he had any honey for sale.

"Oh, yes," was the reply, "I have a fine article just from Virginia, and will show you a sample of it," and thereupon stepped back and in a few minutes returned with some of the beautiful honey. "Is it all like this?" "Yes, sir," said the young man. "How much have you?" was next asked. "About 500 pounds." "Are you sure the lot is as good as that?" he next asked, "as I am a good judge of honey." "Just walk back here and see for yourself," said the young man. "Well, I am glad to hear you say so, and now I'll introduce myself. I am Mr. D. to whom you penned this letter"—producing the letter—"and the next time you undertake to play a sharp game be sure of your man first." If a thunderbolt had shaken the house the young man could not have been more startled at the manner he was confronted by the person he sought to victimize with rascality, and he was compelled to hang his head in shame.

Mr. D. demanded his money, and after a few words a check for it was issued.

Our Maryland correspondent suggests that, "in order to obtain fair prices for honey, the time will come when private routes, similar to the 'city milk routes' will have to be established in order to sell the honey produced!"

Of course it must be borne in mind that the above is an extract from a local paper, and may not be quite correct in detail, and we hope, for the sake of our confidence in humanity, that it is an exaggeration.

The honey routes have been tried in this city, and were very profitable until Perrine (the "boss" adulterator) ruined the business with his glucose abomination! Now, it would be impossible to do anything in that line, for almost every customer remembers the Perrine wagons and their trash!

It might be made successful where such experience is unknown, and such methods unthought of. Perrine boasted that the business brought him thousands of dollars every year, until he ruined it by his avariciousness and dishonesty!

Eugene Secor was elected Vice-President of the Iowa State Horticultural Society at its late annual meeting at Charles City. We learn the above from the *Winnebago Summit*, which also contains the following about wind-breaks in prairie country:

The society offers liberal premiums for new seedling fruits that are desirable, and also for the planting of forest trees. The evergreens recommended for general planting are, white and Scotch pine and Norway spruce, and red cedar and arbor-vitae for hedges. Evergreens make the best wind-break, and their cheapness ought to induce a more liberal planting of them. He says, by the thousand, they can be got for about a cent apiece, large enough to plant out where wanted. European and American larch (tamarack), and 30 or 40 other varieties of deciduous trees are perfectly at home here in Iowa, and should be more largely planted. They beautify the landscape, break the force of the wind, and add to the money value of every farm where planted.

Legislation Against Bee-Keepers.—Mr. M. H. Hunt, of Bell Branch, Mich., writes as follows:

I have just read a copy of a bill introduced in our legislature making it unlawful to keep over 5 colonies of bees within 25 rods of the public highway or dwelling house not owned by the owner of the bees. Should this bill pass it will be a serious matter for a large number of our friends. I advise the bee-keepers in every legislative district to send in remonstrances signed by every bee-keeper and his friends in this State; also let the member from each district know how they feel on the matter.

A similar matter is reported in California, where a petition to the legislature is being signed in San Diego county, asking to have the bees removed from the lands adapted to the production of raisins.

"Class legislation" is to be regretted at all times, and we seriously doubt whether it should ever be enacted. In the cases cited, it would be a grievous burden upon apiarists, and should be energetically opposed.

The National Pure Food Convention was held in Washington, D. C., on Jan. 19, 1887. The President's address contains the following:

This is an unselfish movement, as broad in its character of beneficence to present and future humanity as the cerulean vaults of heaven. Its benefits are truly unselfish, for its foes as well as its friends shall receive its blessings. Its virtues, like rain from heaven, shall fall upon foe and friend alike. We have begun action, and we will not cease until we have accomplished all it is possible to accomplish. To every foe who turns up to discourage us we shall find a hundred friends to cheer us onward in this battle, for pure sustenance, the foundation of happiness, prosperity and good government. The people shall know their enemies, those who for gain would give no encouragement to elevate their race to that state of true happiness that comes from the vigor and virtue of good health. This nation cannot exist many years without protecting its people from fraudulent and injurious adulteration. The time is here, and now we vow eternal steadfastness to this work, until the commerce, the health and life of the American people be as fully protected as are the same of the people of almost all foreign governments.

Some Years Ago, in central Illinois, Mr. H. Thayer had several colonies of bees, but they all winter-killed. Not caring to re-stock the hives he destroyed all but one of them; that one he left just where it stood when the bees in it died. Last summer, says a correspondent, he noticed a lot of bees busily cleaning out that hive, and the next day a swarm came and occupied it. In about 15 minutes after that another swarm came from the opposite direction, and also went into it—the two swarms uniting peacefully. They are now in winter quarters doing well.

Catalogues for 1887.—Those on our desk are from

G. M. Doolittle, Borodino, N. Y.—4 pages—Bees and Queens.
J. D. Goodrich, East Hardwick, Vt.—1 page—Bee-Keepers' Supplies.
M. Richardson, Port Colborne, Ont.—16 pages—Bee-Keepers' Supplies.
J. W. K. Shaw & Co., Loreauville, La.—4 pages—Italian Queens.
A. D. D. Wood, Rives Junction, Mich.—8 pages—Bee-Keepers' Supplies.
Geo. E. Hilton, Fremont, Mich.—3 pages—Aplarian Supplies.
F. M. Atwood, Rileyville, Ills.—7 pages—Aplarian Supplies.

Our Queries

With Replies thereto.

[It is quite useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—Ed.]

Feeding Syrup to Bees.

Query, No. 374.—Ten pounds of granulated sugar will make a little over 16 pounds of syrup. If this syrup is fed to a colony having empty combs, so that the bees will have to store it in the combs, how many more pounds will the colony weigh at the end of a week, providing other colonies are neither losing nor gaining in weight; the bees to have their liberty all the time.—H.

Try it and tell us through the BEE JOURNAL.—G. M. DOOLITTLE.

It would depend upon the time of the year the feeding was done.—G. L. TINKER.

On the average, about 10 pounds, providing there is no combs built. That was my experience with pure honey, and I do not see why it should not be so with syrup.—C. W. DAYTON.

Experiments seem to show that the loss in storing about equals the water in the syrup; so that we must allow only for pounds of sugar. In the above case there would be about 10 pounds of stores. It is curious about this loss; but the fact still holds.—A. J. COOK.

Mathematically, the question cannot be answered. Bees, when fed a given quantity of sugar syrup, always fail to store the same quantity in the combs. This is why all the projects of feeding back honey, sugar syrup, etc., have failed in a pecuniary sense.—J. P. H. BROWN.

Yes, 10 pounds of granulated sugar will make a little over 16 pounds of syrup, more or less, according to its density, and considerably less if it is as thick as it ought to be. In a week after you feed it, you will find that it has not increased the weight of your hive more than 8 or 10 pounds. The proper way is to feed combs of sealed honey.—G. W. DEMAREE.

It is hard to tell without actually trying it. Even then the next trial might show a different result. Would not 16 pounds of syrup from 10 of sugar be pretty thin? At a rough guess I should say there might be a gain of 5 pounds, but it is only a guess, and as before intimated the results might be very different at different times.—C. C. MILLER.

My tests in this direction have shown me that a loss in weight will be found; that is, the weight will not be as much as the food itself before being given; and I find, too, that there is a variation in different colonies, and at different times as to the loss in weight.—J. E. POND.

If you feed such thin syrup as that, what you feed will weigh but 13 pounds, as soon as it is evaporated or ripened to the consistency of ripe honey. I use 3 pounds of water to 10 pounds of granulated sugar, when feeding late. Whether there will be much further loss in weight, will depend upon how much breeding, robbing, etc., is going on.—JAMES HEDDON.

Because the loss is so great, feeding back extracted honey to the bees to make comb honey has been a failure. Only the sugar will count—the colony will probably only increase 10 pounds.—THE EDITOR.

Producing Extracted Honey.

Query, No. 375.—Having 30 colonies of hybrid bees in 10-frame Simplicity hives, can I produce more and better honey by extracting directly from the brood-chamber, or by placing extracting supers on the hives, and using the tiering-up plan? Would it be advisable to place Simplicity brood-chambers, with wired frames and full sheets of foundation, underneath the brood-chamber already in use?—W. P., Wis.

Place extracting supers above the brood-chamber.—DADANT & SON.

By placing extracting supers on the hives, and using the tiering-up plan.—G. L. TINKER.

1. Use the tiering-up plan. 2. Should prefer to place them on top.—G. M. DOOLITTLE.

I think that I should prefer to tier up. I would hardly put anything below the brood-chamber.—C. C. MILLER.

I should prefer extracting supers and tiering-up; but if you resort to an extra brood-chamber beneath the one already in use, you will need no extra supers on top.—J. P. H. BROWN.

I would adopt the tiering-up system, by all means, and put the super over the brood-nest.—W. Z. HUTCHINSON.

Tier up and extract from the surplus department. Put on tiers of combs "under" the brood-chamber proper.—JAMES HEDDON.

I should prefer to put on a super and tier up. It will not give you any satisfaction to put a full size frame under your brood-chamber.—H. D. CUTTING.

I prefer the tiering-up plan; not to get better honey, but for convenience. Honey is honey; and well-cured honey from the same kind of bloom is equally excellent however secured.—A. J. COOK.

1. By using supers and tiering up. 2. With this method, excluding honey-boards must be used to confine the queen, and one or two combs of brood should be placed in the lower story, and then watch that young queens are not reared in the upper story. Under these conditions it is all right.—C. W. DAYTON.

The quality of the honey will be all the same whether you extract from the brood department or from supers, but to take the honey from supers, on the tiering-up plan, is much the best way. There is nothing to be gained

by putting the supers under the brood-chamber.—G. W. DEMAREE.

1. Put on upper stories and adopt the tiering-up method, by all means. The number of stories to use will depend upon the honey crop; enough should be used to catch all the nectar the bees bring in, and also to allow of full evaporation or ripening before extracting. 2. I think not; I should place them above, by all means.—J. E. POND.

Place the extracting supers above (not below) the brood-chamber. The honey will not be better, but the plan more convenient. Whether the quantity of honey will be much or little will depend upon the season.—THE EDITOR.

Management for Comb Honey.

Query, No. 376.—Next season I shall work my apiary for comb honey, and this is the course I am thinking of following: First, I shall get the bees to breeding as early as possible, and keep all combs full of brood by contracting, uncapping honey, and giving only enough comb for the queen to keep filled with brood, striving thus to have all the honey put into the boxes. Next I shall permit one swarm from each colony; shall hive it on 4 or 5 frames with starters of foundation, and with a large case of sections filled with comb foundation. Now as to the old colony that has cast a swarm: it is without a queen, and for two weeks the bees will put the honey into the brood-frames, thus getting the start of me. I propose to set aside, early in the spring, a few colonies to rear queens, placing these queens in nuclei until wanted. Four days after a colony has cast a swarm, I shall cut out all signs of queen-cells and introduce one of these young queens, which I will expect to keep the honey out of the frames by keeping them filled with brood. Does the above plan seem feasible?—A. L., Mass.

Yes.—DADANT & SON.

Yes; all but the waiting four days. Give the queen in 24 hours, and for me I should as soon have a virgin queen for this purpose as a laying one.—G. M. DOOLITTLE.

Theoretically, your plan is perfectly feasible, but practically it will be attended by a few objections, such as too many swarms, and too much laborious "tinkering," particularly in a large apiary. Besides, a constant disturbance of a colony of bees during the midst of a honey flow is objectionable.—J. P. H. BROWN.

I believe your plan to be a good one, for a lengthy and light honey flow; but in many locations we must get the honey from an old colony that does not swarm. The honey flow is too short for such manipulation and building up of the colonies after swarming. It needs a cheap assistant with a sharp eye, to find and cut out queen-cells.—C. W. DAYTON.

Your theory is all right. Let us know just how it turns out in actual practice.—H. D. CUTTING.

The above plan is feasible, but it is doubtful if the best one that may be pursued. The rearing of the young queens as proposed would cost the use of several colonies, and result in a loss of the honey they would produce, with only a trifling gain; for,

after a colony or two has swarmed there will be queens enough costing nothing for all purposes. Again, if the flow of nectar is short, as is the rule, it seems best to prevent increase by hiving the swarms into hives of brood which may be readily prepared for the purpose where there are many colonies in an apiary.—G. L. TINKER.

Yes, and it would be even if queens were not introduced. The old hive will be full of brood when a swarm leaves, and there will be but few bees left; so that the new queen will be in time. I should not go to the trouble to rear the queens, but rear one from each colony. I think it will pay best.—A. J. COOK.

The plan you suggest will work very well. In its main features it is much like my plan for preventing increase, and utilizing the swarming energy. I do not cut out the queen-cells at all, for the reason that I shake nearly all the bees off of the frames on the seventh day in front of the hive containing the swarm, and this so weakens the old colony that the first queen that hatches, or any virgin queen turned into the hive, will destroy all the queen-cells, and prevent after-swarms. I prefer to introduce virgin queens to colonies just after casting a swarm.—G. W. DEMAREE.

It is worth trying. As the plan is one of your devising you will be more likely to succeed with it than if any one else devised it, but the longer you keep bees the less you will feel certain about what any plan will do till fully tried by the bees. You might try one or two colonies by giving the new queen, without waiting four days.—C. C. MILLER.

Theoretically, the plan is not only feasible, but it is the plan to work after. In practice it will be found difficult to follow it, owing to the many "snags" that will be found to run against. My advice is, to follow this plan as nearly as possible, as it is the general plan used by all experienced apiarists.—J. E. POND.

For the "first two weeks" not very much honey will be gathered by the old colony. There certainly will not, if the Heddon method of preventing after-swarming is practiced; and even if there is, the bees will "elevate" it to the sections just as soon as the young queen begins to be crowded for room. The colonies run for queen-rearing will, in this case, be worse than wasted. Do not do it.—W. Z. HUTCHINSON.

Much of your proposed plan is practical with a small number of colonies. I would let the old colonies supply the new queens, and you need have no fears of the old brood-chambers becoming clogged with honey, for as soon as the young queens need the room, it will all be changed to brood.—JAMES HEDDON.

Your plan will doubtless succeed in an apiary of medium size. Try it with a few colonies, and then you can better judge its practicability.—THE EDITOR.

Correspondence.

This mark \odot indicates that the apiarist is located near the center of the State named; δ north of the center; ϕ south; \odot east; \ominus west; and this \odot northeast; \nwarrow northwest; \nearrow southeast; and \swarrow southwest of the center of the State mentioned.

For the American Bee Journal.

Feeding Bees for Winter.

DR. A. B. MASON.

Nearly every fall since I began bee-keeping, 18 years ago, I have had to feed some of my colonies so that they might have plenty of stores for winter. Previous to last season I had worked for extracted honey almost exclusively; extracting all the white clover, basswood, and sweet clover honey, relying upon the yield from fall flowers for winter stores; and the fall honey being often a minus quantity, has obliged me to do a large amount of feeding, sometimes as many as 70 colonies, and it has always been a dreaded task.

On removing sections and the supers used for extracting, the first of last October, I found that most of my colonies would require feeding in order to have plenty of stores for winter, and I proceeded as follows, and the work was so readily and rapidly completed that I shall never dread feeding again:

The frost having previously killed the honey-producing flowers, and the bees being quiet and closely clustered, on Oct. 6 I weighed every hive and its contents, and noted the number of spaces occupied by bees, and the number of frames, etc. Towards evening the weather became warmer, so that the bees were flying quite lively. I shook the bees from several hives, and found their weight. I also weighed several empty combs, and empty hives, and by a brief calculation I found the amount of stores each colony had, and when one needed feeding, I raised the front end of the hive about 2 inches, and nearly closed the entrance, so as to prevent robbing while feeding. Having on hand a quantity of well-ripened unmarketable honey on the morning of Oct. 7, it being warm and the bees flying I commenced feeding. Having a quantity of tin boxes holding about a pound of honey each, I had them filled, and going to the hives where food was needed, I removed the cover and turned up the back end of the quilt and poured from one to five pounds of honey into each hive.

But few colonies were fed before the bees of the whole apiary seemed to have found out that there was honey to be had, if they did have to fight to get it, and I had to suspend operations. But not wishing to be out-generaled, I prepared for an evening entertainment, and as soon as the bees had nearly ceased flying I again commenced operations. But not wishing to repeat "Novice's" experi-

ence, so graphically described a few years ago in *Gleanings*, when he tried working at the bees at night with "Mrs. Novice" holding the light, and the bees doing a large amount of crawling. I did not raise the quilts, but raised the front end of the hive still higher with one hand, and poured in the honey rapidly, and so kept in all the bees. When too dark to see well, a light was held for me. The next morning every thing was quiet, and in "apple pie" order. This operation was repeated for two evenings, and my bees were ready for winter quarters, so far as I was concerned.

When I commenced feeding there was an average of 9 1-5 pounds of honey to each colony, and I fed an average of 6 pounds per colony, and the average loss in weight for the three nights and two days while feeding was 1 1/4 pounds. A colony that was not fed any, lost 1 1/4 pounds, and others not fed lost in weight. One colony that was fed 6 pounds gained 3 1/4 pounds more than was fed; and there was no robbing.

On Nov. 13 all were placed in the cellar with an average loss in weight from Oct. 9—the date of the last feeding—of 1 5-7 pounds.

The above is a portion of my essay read at the Michigan State Bee-Keepers' Convention, held at Ypsilanti recently, and at which I am reported as saying that the loss in feeding 6 pounds of sugar syrup was 1 1/4 pounds. I did not feed sugar syrup, but fed as stated above, well-ripened honey, and I was surprised at the loss in weight, and should have expected greater loss in feeding syrup.

Auburndale, \swarrow O.

For the American Bee Journal.

Securing a Uniform Price for Honey.

J. F. LATHAM.

The general gist of the articles and remarks that appeared in the closing numbers of the BEE JOURNAL for 1886, and thus far this year, embodying suggestions relative to concerted action by apiarists in regulating the sale of their honey, seem about "pat" to the call of the times; particularly those of the Editor on page 771, and Mr. Baldrige on page 774 of the BEE JOURNAL for 1886. Although the slipshod, back-woods-go-as-you-please bee-men mentioned by the Editor, and the "wholesale commission dealers" and "up-with-the-times mischief-makers" mentioned by Mr. Baldrige, may be quite prominent in their spheres, they fail to complete the list.

But little fear need be entertained in regard to the "slipshods," as their shadows, now scarcely discernible, are fast relegating to—nowhere. If the "real mischief-makers" described by Mr. Baldrige as "running around," etc., disparaging their good fortune, and "forcing grocers and everybody else to take the 'stuff' at their own price," are serious obstacles to a brisk demand for honey at paying rates,

there is also another class who may be added to the list and described as "running around" among producers offering "spot cash" for their whole crop at the apiary; relieving them of all trouble in finding a market, costs of transportation, and as often viewed by the bee-keeper, commissions; but the actual "runner around," when making calculations of his sales, needs no prompting to anticipate which side of "profit and loss" will be augmented by the commission; illustrating very fully that Mr. Baldridge, who represents himself as an old honey dealer, is well posted in what he is writing about. Notwithstanding the many facts in his statements, the "white sheep" of the flock ought not to be blackened by inappropriate appellations. Scape-goats often fail to fill the bill of the immolator!

Eight and 10 cents per pound, at present costs of production, for a good quality of comb honey at the apiary, does not invariably result in pushing things the right direction, when the same honey costs the consumer 15 and 20 cents per pound; neither will a second-hand purchase of a ton or more of the same honey in lightweight packages, and disposing of the same at a price per section that was paid per pound, list among the "business-like methods" that always result in securing to all *bona-fide* producers "a fair, honest and decent price for their honey."

But what is a fair, honest and decent price for any commodity but the medium rate that represents the equilibrium of value in exchange—the expositor of supply and demand? If a bee-keeper makes the production of honey wholly or partially the means of a livelihood, the exigencies of his avocation require an exchange of the fruits of his labor for other commodities that the calls of life demand. A brisk exchange on satisfactory terms, results in "business prosperity." A lethargic call for the staples of life results in "business depression." When an excess of production is forced upon the market the consumer gets the advantages of low prices; while a "lean" market and high prices favor the producer. When a large surplus of corn is produced in the West, the Eastern consumer gets his supply at a comparatively low cost; while a deficient crop increases the price. In either case the exigencies of location lead the consumer to comply with the fluctuations of the market, which he can neither "bear" nor "bull"—local production not being sufficient to aid him in influencing "trade rates."

It is not apparent that a dictation of sale rates can be made *radically* applicable in establishing a uniform price for a product derived from an area so variant as those from which the honey crop is obtained. When apiarists in California, Texas or Florida can produce honey, transport it to the Eastern markets, and sell it for less than what would be remunerative for honey from the apiary of the bee-keeper to whom the Eastern markets are home markets, how is the difference to be equalized? Surely, not by

any "robbing of Peter to pay Paul" edict from a local association; or Board of Trade that would monopolize the sale of all the honey within its reach. Monopolies are expensive luxuries. The less tribute a product pays to useless handlers, the more satisfactory will be the negotiations of those who may be the most directly interested in its movements.

With the foregoing incomplete summary of the subject, it seems that the main features of an association for honey producers need be no more or less than a systematic centralization of ideas based on information representing the true status of the honey crop each season; the requirements of trade, demand and supply, in the different localities of our apicultural area; and a central body distributing the rays of its satellites—instead of the reverse—by a genuine, *bona fide* market report, coupled with such suggestions as the movements of the markets from time to time demand.

Cumberland, 9 Me.

For the American Bee Journal.

The Cappings over Honey.

C. P. DADANT.

On page 71, Mr. Hutchinson speaks of my incidental quotation from Mr. Cheshire's writings, as though it was the main argument of my article. I would ask him to read the article over and answer my question: Why is the honey in the sound, sealed cells liquid while the other is granulated? I would offer to send him a sample of that honey, free and prepaid, but I suppose he has seen the same thing.

I also wish to state that I quoted *only* Mr. Cheshire's conclusions on the imperviousness of the cappings, which Mr. Hutchinson does not give. My reasons for quoting so little from Mr. Cheshire were, that the part of his writings given by Mr. Hutchinson is rather contradictory in itself since he says that "the air intervening between the irregular tape-like shreds cannot escape" (italics mine), which would mean, if it means anything, that the cell is air-tight. Moreover, Mr. C. calls the honey-cells air-tight.

These contradictions in the most thorough and most scientific work on bee-anatomy, in a book that has corrected gross errors, that we all believed as truths, in the writings of our leading teachers, only show that this question of imperviousness is a thorny one.

I would add only this: I have repeated, on some of the honey mentioned in my former article, the tests made by Mr. Cheshire, of steeping it in water for weeks, and the result in my case was *entirely negative*, for not a single cell of it absorbed water. True, this does not disprove Mr. Cheshire's test, but it proves that different circumstances cause different results. I would ask Mr. Hutchinson to make this test himself on different grades of comb honey.

Hamilton, 30 Ills.

For the American Bee Journal.

A National Honey Company.

SAMUEL RAU.

After reading Mr. J. V. Caldwell's article on page 308 of the BEE JOURNAL for 1886, I thought a good deal about the honey "corner" he slightly hinted at, but as the "corner" business has heretofore been manipulated, I confess the idea was rather unsavory to me.

Since then I have read of the cattle men of the West, who complain of the middle men robbing them of all the profit in the business, and are moving towards forming a gigantic cattle pool. They contemplate forming an association with a capital of \$100,000,000 in 1,000,000 shares of \$100 each. Now, it seems to me that we honey producers of this country, "flowing with milk and honey," could get something feasible and tangible out of this movement to help our own case.

Why could not the bee-keepers of North America form an association with 100,000 capital in 10,000 shares of \$10 each? Or, if this amount is inadequate, increase the capital to \$1,000,000. Some of the weak-kneed ones may, at first sight, be almost scared, and in amazement wonder where all this money is to come from, but hold your peace and see. The company would have to be organized upon the most substantial basis possible; be under the management of a certain number of directors to be elected by the stock-holders; these directors should be no weak-kneed or hesitating men, but the most practical, substantial, energetic, influential and pushing men in the whole fraternity; they should be men of experience and unquestionable honor! They should be men of pluck and the ability to organize—such men as the Western Union Telegraph Company, and the Standard Oil Company have at the helm. Do not say that we do not have them; we have the material out of which to make them. The opportunity and the occasion almost invariably produce the men.

Let each bee-keeper take one share of the capital stock, for say every 40 colonies of bees, or fraction thereof that he owns. I am writing without any statistics at hand, and this is made merely as a suggestion, and might be improved upon. These shares might be made payable in several different annual payments, bear 6 per cent. interest, and be secured by first mortgage on the bees represented. On these mortgages any amount of capital necessary to carry on the business could be raised. Middle men could be entirely dispensed with, thereby increasing prices to the producer without increased cost to the consumer.

The company should sell stock only to actual bee-men and honey producers, and control the entire honey interest of this continent. It could soon guarantee to its stock-holders better prices than they are now receiving, as well as guard against any

further depreciation of prices. They would of course have to establish honey depots in all the principal cities and towns of this country, and perhaps eventually open up markets in foreign lands. Then let no honey be sold at any price except through, or by the consent of this company, and each member be allowed to ship in honey in proportion to the amount of stock he has.

You can call this a "corner," pool, or what else you please, but I am convinced that if rightly organized and ably managed, a company of this kind could not fail to be of immense advantage to the bee-keepers of this country, without working to the detriment of any one. The railroad companies pool issues; the great manufacturing and mining companies organize and combine for their own financial safety and protection, and why not we? No doubt there would be obstacles to remove and difficulties to surmount, and many a "Doubting Thomas" to silence. It might even take several years to fully organize and equip a company of this character, but perseverance and persistent effort would in due time accomplish the desired end, and lift the vast honey interests of this country out of the slough of despondency and place them upon the solid basis of permanent prosperity. The hour is ripe—the opportunity of a life-time is before us. Will we improve it? What say you, fellow bee-keepers?

Columbiana, O.

For the American Bee Journal.

How to Sell Honey, etc.

W. J. CULLINAN.

As to fixing the price of honey, I think it would be difficult to do, although much might be done toward keeping up the price. I am of the opinion that if bee-keepers would organize themselves into commercial unions in every State, gather up the honey of their specified territories, grade, crate, and offer it in attractive shape and at stated prices, it would be a big stride toward success.

In the meantime, each individual honey-producer should thoroughly canvass his (or her) own neighborhood, and thus build up a trade of their own. There is no apiarist but who has lots of customers all around him, and he will surprise himself if he will but make an effort to bring them in contact with his product and solicit their patronage.

Tell them (your customers) that honey is good for the lungs and liver; that they will not cough so much nor be so bilious; that it is a blood purifier, a mild laxative, in fine a thorough and harmless renovator of the whole system; that they will live longer, feel better, be more at peace with themselves, their Maker, and with mankind; die happier, and leave a greater legacy to their children, if they will but consume honey in lieu of other sweets. Remember, "you know not what you can do until you try!"

On Nov. 27, 1886, I carried 16 colonies of bees into the cellar, the temperature of which I have tried to keep as near 42°, Fahr., as possible, although at one time it sank to the freezing point. I find that the bees keep the most quiet at from 38° to 42°. On Jan. 20 I carried 3 colonies out of the cellar, and found, upon examination, that they were in splendid condition, with scarcely a dozen dead bees to the colony, and hardly any perceptible diminution in their stores. I never saw bees look cleaner, brighter and happier at this season of the year. It is too soon to crow, but I must say that I am highly pleased with cellar wintering, so far!

Mt. Sterling, Mo. Ills., Jan. 27, 1887.

For the American Bee Journal.

Effects of too Much Ventilation.

C. W. DAYTON.

Though I have always argued in favor of ventilation, I did not always find it entirely satisfactory. Many of the readers probably know that I practiced suspending the colonies in "mid-air" in the cellar.

When I began keeping bees I thought if I could get the bees safely through the winter I should be satisfied. This was only partly the case. While I was pleased to find the colonies strong and healthy it was less pleasing to see them entirely destitute of brood. By experiment it was found that the nearer the condition of the colonies approached the "mid-air" suspension method of ventilation, the more certain was the preservation of the lives of the bees, and their ability to rear brood was proportionately lessened.

My cellar is contrived so that any degree of temperature between 40° and 50° can be easily maintained. The colonies were put into the cellar from Nov. 12 to Nov. 25, and taken out from April 12 to April 25 in every year. Sometimes 100 colonies wintered entirely without loss, and when put out they were found without so much as an egg to indicate the presence of a queen.

When they were put out late in April it would be late in May before young bees could be reared to take the place of those that were fast disappearing on account of old age. As a consequence, strong colonies that continued a month without replenishment, became weak, and consisted almost entirely of young bees. Had the colonies come from the cellar weak in bees they would have been very likely to have dwindled entirely away; but the colonies that were wintered on the suspension principle were almost without exception very strong and healthy when put out, so they built up again after the dwindling season was over.

Having the colonies in their weakest condition (in number of bees) about the middle of May, and the white clover coming into bloom from June 10 to June 20, it made lively business getting the weakened colo-

nies in good working condition in the short space of time. Under these conditions have I reported successful wintering of the bees, and that they were not ready to sip from the clover when it came into bloom.

By the suspension method I have wintered strong colonies in all temperatures ranging from 30° to 50° above zero, and maintained all the winter, and it was a rare case if the colonies were not well supplied with healthy bees when taken out in the spring. In wintering very small colonies at a temperature of 30°, they gradually dwindled away, yet not so fast but that some bees remained to protect the queen until taken out of the cellar. This experiment was tried many times, and it was seldom that the colonies came through the winter in good condition.

When the temperature for the small colonies was at 50°, they came out tolerably well, but as they needed warmer and closer packing in the spring, and close attention all the time, I gave up their care as too "puttering" business. I think 60° would be about right for 2-frame nuclei in the forepart of the winter, and 75° or 80° the proper temperature to start brood-rearing in March and April. Ten degrees lower than that would do if their brood-chambers were tightly sealed above, but I find where the brood-nests are tightly sealed all winter, moisture accumulates and disorders the colonies so that 99 out of a 100 are in a deplorable condition long before spring comes to their relief. The abundant ventilation and consequent conditions seems to restrict the bees so that they remain tightly clustered for the economizing of heat.

Bradford, O. Iowa.

For the American Bee Journal.

Prevention of Swarming.

J. H. ANDRE.

The general opinion of those who have spent a life-time with bees, is that there is no sure way to prevent swarming, unless the colonies are kept weak by dividing, and then one must use care or the hatching of young queens will frustrate his plans. But if one does not want natural swarms, he will hardly want to divide colonies. My way of preventing swarms (remember, I do not say it is infallible) is to feed the bees in the spring until the apple blossoms furnish nectar; if there are no blossoms, feed the bees later, but discontinue the feeding at least a week or ten days before white clover blossoms; this will get the colony strong in bees, and enough should be fed so that 10 pounds will be stored in the hive.

There is usually a short honey drouth between apple bloom and white clover, and if the bees have been fed liberally previous to this, it will be quite natural for the queen to cease laying. This will give a strong colony of bees, and of the right age to gather honey instead of swarming, and when

the harvest of white clover comes these colonies will not be overstocked with eggs or brood. Give them a chance to work on surplus, and if you take off the cases entire, do not wait for them to fill the last sections, but put the unfinished ones in the next case. This is a good plan to try, and one that does no damage.

Lockwood, ♀ N. Y.

For the American Bee Journal.

U. S. Honey-Producers' Association.

J. F. HAYS.

In his suggestions to honey producers in regard to selling their honey in home markets, Mr. M. M. Baldridge says: "Pay retail agents a good commission; if they disobey instructions, take away the unsold honey and refuse to supply them with any more until they comply with your wishes."

I do not look upon this plan in such sanguine light as does Mr. B., for in 99 cases out of 100, instead of the dealer complying with the producer's wishes, he would be supplied with an inferior quality of honey, likely enough built by the bees in a soap-box inverted on an old-fashioned box-hive, while the producer with his first-class honey would be left in the lurch. This is a very important point to consider in this matter of controlling the price of honey, and for which I can see no remedy.

Mr. B. next informs us that 20 and 25 cents per pound is none too much for honey, on the principle of "live and let live." Now let us look at the inconsistency of this. A few years ago honey was in demand at 25 cents per pound; then honey producers were almost "tickled to death." They boasted that they were making from 200 to 500 per cent. on their investments, and boasted so long and loud that they attracted public attention, and the people were not slow to take hold of a business requiring such small capital and with such paying results. Naturally enough, there are now more than fifty honey producers to where there was one then; consequently prices for honey have fallen on account of over-production. Now there is quite a change in the tune. Instead of boasting of enormous profits there are pitiful whims about not getting former high prices, on the principle of "live and let live."

Mr. B. next proceeds to berate the commission men. He says that commission men are to a great extent responsible for the prevailing low price of honey. Will any bee-man admit such misanthropic nonsense? His remedy for the evils commission men have wrought, is organization. By what means he expects honey producers to better their condition when organized, he leaves his readers in blissful ignorance. So did the leaders of the Grange movement a few years ago. That word "organize" possesses a magical power that is generally sufficient to cause men to jump without considering where they may alight.

The farmers were made to believe that they were suffering terrible things at the hands of "middle men;" and the cry was, "organize," and organize they did, but they ignominiously failed to better their condition one whit. Does Mr. B. expect honey producers to make themselves a laughing-stock, as did the Grangers, by demanding a high price for their honey on the ground that they are organized?

A United States honey-producers' association with its members so widely situated must, of necessity, not only fail of its object, but make matters a great deal worse. Simply because a little handful of flour-producers on Fox river can control the price of a staple commodity, it does not follow that the bee-men of the United States can likewise control the price of an article that is not a staple, and with a steady increase of its production to contend with besides. Beemen should be warned by the sad experience of others.

Macomb, ♀ Ills.

For the American Bee Journal.

Warming Bee-Repositories.

EUGENE SECOR.

During our coldest weather it is often desirable to heat our bee-repositories. The cheapest way in which this can be done, and at the same time produce the desired result in health and comfort to the bees, is worthy of consideration. Some use a hard-coal stove, and some, I believe, an open fire in a cellar fire-place. In large rooms where it is practicable to use either of these, I see no reason why they might not be economical and satisfactory. Others carry a hod of live charcoal into the cellar at every "cold snap." This I think can be improved upon by the use of an oil or gasoline stove. I have not used the latter, but I am using for the second winter, the former. I am inclined to the opinion that a common kerosene-oil stove, such as are used in a great many summer kitchens, is good enough for all practical purposes. So far, this winter, I have had to light mine only a few times. The temperature out-doors has dropped several times to about 30° below zero, but the cellar has been kept at as near 45° above zero as possible. When it gets below 40° I light the oil-stove. In a few hours the temperature of a room 12x20, and 7 feet high, will be raised 10°.

The cellar under my house is 32x40 feet, divided into four rooms. The partitions are studded, lathed and plastered. The house is heated with a soft-coal, hot-air furnace. The northwest room is occupied by that. The southeast room, cornering with the furnace-room, is the bee-cellar. It has no outside windows nor doors. It is Egyptian darkness from November until April. The heat from the furnace affects it but little, except that the whole cellar is kept dry by it. (Seed-corn is kept in the cellar.) As

the grounds slope to the north, and the outside entrance and several windows are on that side, and as I do not try to keep any of the rooms from freezing except the bee-room (which is also the vegetable apartment), when the fluid in the thermometer gets to playing "bo-peep" down among the thirties, and continues those antics for two or three days, the bee-room will sometimes get a little too cold. Then the oil-stove is lighted. I find it so simple, so cheap, so easily controlled, so perfectly adapted to the needs, that I ask nothing better.

Forest City, ♀ Iowa.

For the American Bee Journal.

Improving the Honey Market.

GEO. W. PENN.

I think that it is time for the bee-keeping fraternity to wake up, and do something to better the condition of the honey markets. What injures our honey market more than anything, is the small producers. Take my location for an illustration, which will compare well with the whole country. A certain per cent. of all trades and professions in this town and country keep bees; the per cent. will run about as follows: Doctors, 3 out of 5; merchants, 2 out of 18; lawyers, 1 out of 15; shop-keepers, 4 out of 9; hotel-keepers, 1 out of 5; laborers, teamsters, etc., 12 out of 40; and farmers, 2 out of 5. Now but a small per cent. of all these people will pay any particular attention to their bees; so if they happen to get any honey it will be in bad shape for market, and they will almost give it away to get rid of it. Farmers sell broken lots of honey for 8 cents per pound, and take it in trade; and in large boxes, to be cut out as sold, they may get 10 cents per pound. So I am compelled to hold mine until all these lots are sold.

The merchants say to me that they would rather pay me from 3 to 5 cents per pound more for my nice one-pound sections of honey, but they are compelled to take it off the farmers' hands or lose their trade. So they cannot afford to pay much for it, and hence they sell it cheap, although I have been getting 12½ cents per pound in cash for my comb honey.

Of course it sells slowly as long as so much cheap, broken stuff is on the market. In making a delivery recently, of over 4,000 pounds to about 40 stores, I learned some new ideas. One was that the finest and nicest honey put up in the best shape has to take a "back seat." I called at one store, just after delivering 5 cases of one-pound sections, to tell them about the empty cases, etc. Not seeing any of my honey in sight, I began to wonder what had become of it so quickly. They told me that they did not know when the cases would be empty. In looking at it they concluded that it was such a nice lot of honey, and in such nice condition that they had thought best to keep it out of sight until all the other lots were disposed of. Of course I could not

say anything, for they had paid me for my honey, and they had a perfect right to do as they liked with it.

Comparing the sale of extracted honey with that of comb honey, I have sold each year 5 pounds of extracted to 1 pound of comb honey. I always carry a sample jar, and fill it out of my bulk of honey, so I can truly say it is an exact sample of all of my linden honey, or white clover, or what variety it represents.

Our merchants are generally shrewd business men, and one can expect them to ask some questions; hence one must be posted, and have an answer ready for every question. When you once have a trade established with a merchant, and the merchant with his customers, on your brand of extracted honey, you will have no difficulty in selling.

In this manner I have sold, this season, 25 barrels of nice extracted honey. I have sold just about one-fourth as much comb honey. About the only way to successfully control the honey market, in my opinion, is to have one buyer in each market, and every store in that town or city to buy honey only from that one buyer.

In that way all stores can avoid being overstocked with a lot of broken and inferior lots of honey. These mess lots can be bought cheap by this buyer, and sold to some factory so as not to ruin the general market. In this part of the country there is too large a percentage of the people generally keeping a few bees, to make it profitable for any one.

Colfax, © Iowa.

For the American Bee Journal.

The Season of 1886.

J. M. HAMBAUGH.

In the fall of 1885 I put into winter quarters 101 colonies of bees in my home apiary, and 17 in another apiary. My home apiary contains 85 Simplicity hives, and 16 Quinby hives, *à la* Dadant; the other apiary has all Quinby hives. I wintered all on the summer stands, removed all surplus combs from the sides, and confined the bees on from 5 to 9 combs; removed the burlap on the top of the combs, and placed strips $\frac{3}{4}$ of an inch thick every 3 or 4 inches crosswise of the brood-frames, to admit the bees over the top of the brood-frames, which gives free circulation of air, etc. I then tucked side burlaps close and snug around the outside frames, letting them lap over the top of the brood-nest; and packed dry, hard maple leaves at the sides, and filled the cap. I also put long slough-grass around each hive, being careful not to obstruct the entrance.

Quite a number of my colonies were so strong that I could not confine the bees on less than 8 or 9 frames, in which instance I would place the division-board on the north side of the hive, and simply fill the caps with absorbents. I should have said before that the rear end of each hive

was raised 2 or 3 inches higher than the front end.

The winter, though quite rigorous, was not so severe on bees as the one previous. There was intervals of moderation, that gave the bees a chance for flight. On Feb. 8 and Feb. 22 they had good flights; also on March 6 and March 15. I removed the wind-breaks, packing, etc., from March 15 to March 17, and found 6 dead colonies out of 101; generally speaking, I found the bees in splendid condition. Those that had gone into winter quarters strong in numbers, were in the best condition. Quite a number were found very scant of stores, and had to be fed. Two had died of starvation, 2 from being robbed in my absence, and 2 were too small numerically, and succumbed. One was in a Quinby hive, and 5 in Simplicity hives; the one in the Quinby hive was a mere nucleus when it began the winter.

The 17 colonies at my out apiary were simply prepared by putting the division-board on the north side of the hive, until the bees covered the combs fairly. I put $\frac{3}{4}$ -inch sticks under the burlap, and filled the cap full of dry leaves. These 17 came through in splendid condition. I equalized each and every hive with from 15 to 30 pounds of stores, according to their strength prior to packing, and I noticed, when overhauling them after all packing was removed, that while some of the colonies seemed to have an abundance of stores, I could scarcely notice any difference in their weight, many being scant and some destitute. Can any one give a reason for this (to me) strange phenomenon?

Early in the spring I removed the 15 colonies in Quinby hives to the out apiary, a distance of three miles, making an apiary of 32 colonies in Quinby hives; I kept each kind separate as nearly as I could. During fruit-bloom I bought 17 colonies of bees in box-hives, and transferred them to movable Simplicity combs. These 17 additional colonies I added to my out apiary, making 49 colonies in all, spring count. Vegetation was from a week to 10 days in advance of the previous two years. From April 25 to May 7 bees built up rapidly and gathered some honey from willow and fruit-bloom. White clover bloom made its first appearance on May 7, and bees gathered honey from it on May 12.

I worked the out apiary for extracted honey, and during the season I took 5,700 pounds from it, and increased the apiary to 56 colonies by natural swarming. The average per colony was 116 18-49 pounds, spring count.

Our fall harvest was almost an entire failure. My home apiary did not produce nearly as much as the out apiary, from the fact that within a radius of three miles it is surrounded with over 500 colonies of bees, and, besides, linden pasturage is not so good, and the bees in the Simplicity hives did not build up to the strength of those in the larger hives. This much has been gained from practical experience, and my conclusions are

irresistible, that a hive is not perfect in its construction that does not give the queen her full capacity of egg-laying, and uninterrupted power of reproduction; and the surplus department must be made to accommodate the needs of the most populous colonies, or contracted to meet the requirements of the smallest.

The production of my home apiary was 3,416 pounds of extracted, and 400 pounds of comb honey in 1 and 2 pound sections. I worked 66 colonies for extracted honey, 11 colonies for comb honey, and 3 for queen-rearing. The increase was made by division and natural swarming, and amounted to 92 colonies.

Spring, © Ills.

For the American Bee Journal.

Special Legislation for Bee-Keepers.

N. N. BETSINGER.

When Dr. C. C. Miller introduced this subject in the International convention held at Indianapolis, to the most of us it was a surprise that a man of so much thought and study should take the position of the desirability of obtaining special legislation for bee-keepers. Without premeditation, I found myself on the negative side of the question, staunchly denouncing such a course; but, upon reflection, and after reading all that has been written on this subject, I am conscious of the feasibility of such legislation, for the following reasons:

1. Because it is just and right, and we should demand protection from the Government.

2. We are public benefactors, producing a sweet by means of our profession that cannot be excelled for its usefulness, for the sustaining of both body and mind.

3. The production of the honey crop would be much larger, and could be produced at a less cost than at the present time.

4. The price of our product would be more uniform and more easily regulated, not by monopoly, but by the amount produced, and thus be more remunerative to us.

5. Bee-keeping is a science, and should therefore be upheld by our Government, which would encourage the attainment of perfection in our pursuit.

Marcellus, © N. Y.

For the American Bee Journal.

Results of the Season.

S. VALENTINE.

In the vicinity of Hagerstown and southwest of it, the bee-keepers are jubilant over the results of the past season, whilst north and east of this place it was another failure. In the fall of 1885 my bees were put into winter quarters weak in numbers and very short of stores, and came out weak in the spring; but April being warm and pleasant, they built up very fast. May brought with it an

abundant crop of all kinds of bloom, but very little honey, the weather being too wet and cold. On June 1 I had to feed 110 pounds of sugar in one of my apiaries, and to have done justice it should have been a barrel of sugar. About June 18 the honey-flow commenced, and continued until July 25, when the heavy rain-storms cut it short. After this we got no honey. I had plenty of fall bloom, but scarcely any honey was gathered after Aug. 1. The honey flow was not much over half its usual length, yet it was a good yield.

In the spring of 1886 I commenced at my out apiary with 68 colonies, 12 to 15 were weak, and the balance in fair condition. From this yard I took 2,000 pounds of honey in sections, and 3,000 pounds of extracted honey, and put into winter quarters 173 colonies.

In this apiary I took 2 colonies of Albino bees in April and worked them to see what could be realized from them; the one I worked for comb honey, and the other for extracted. The one worked for comb honey (counting it in honey and increase) netted me \$112.30; the other, \$56, although the latter was the most promising in the early part of the season.

I put into winter quarters 20 colonies from the stock worked for comb honey. They are all in good condition. If I live and my bees live, I shall keep a record of those 20 colonies, and report next fall. At my home apiary I used most of the colonies for queen-rearing, so I took only 2,000 pounds from it, most of it being comb honey.

Hagerstown, Md.

For the American Bee Journal.

That Organization for Bee-Keepers.

JNO. A. BUCHANAN.

If it can be made to appear that the interests of bee-keepers would be best subserved by forming a compact for the purpose of sustaining the price of their product, the sooner they organize the better. This course has been hinted at quite frequently since honey has been sold by so many at prices that have not justified or paid cost of production. It is claimed that this unhappy state of affairs should not of necessity exist; and that by legislation, or by the organization of an association for the purpose of holding up the price, would be the remedy for the existing trouble. As to the foolishness of any attempt at securing legislation in the interest of the pursuit, I would say such folly is unpardonable.

As to a "honey-producers association," and the possibilities of its power ever becoming so great as to be able to control prices, I have grave doubts. Mr. Baldrige says that producers should know what is a fair price for honey compared with that of other commodities, and then demand this price. He also intimates that this association of honey producers shall fix a price at which their

product must sell. I would prefer to be left free to buy and sell in the open market of the world. I do not like the idea of being cramped or in any way hemmed in or dictated to.

"Fix a price" that would fairly compensate the producer. How could this be done? In one State the average yield of surplus honey may not be more than 25 pounds per colony, in another State the average would be 50 pounds. In this one case the honey sold at 20 cents per pound would be \$5 per colony, which might satisfy the producer. In the other case, 15 cents per pound might be considered good enough. How would an association proceed to fix and regulate prices for each locality, and for the different grades offered for sale? Speculators would upset all the arrangements every time. No, this is not the way out.

Still another plan has been proposed, and that is to establish storage-houses where all honey produced shall be stored, then graded and held until the offers would justify, or rather satisfy the producer. In order to enable producers to hold out for the best prices, the association is to advance money to the needy ones on their consignments. If any bee-keepers are willing to go into such an arrangement, it appears to me that they have no confidence in their own business capacity, and therefore give their business into the hands of others to manage for them.

Some years ago a wool-growers' association was organized in this neighborhood. A wool-house was established first in Steubenville, O., and subsequently removed to Philadelphia, Pa., where a great many farmers sent their wool to await better prices—which they generally failed to get. A man in whom great confidence was placed was selected to manage affairs, and this he did so adroitly that he cheated them out of the whole business, the concern being left in such a shape as to entirely ruin financially a great many excellent men of this and other neighborhoods. Here the proceeds of a life-time of toil and struggle for a competency was swept away—all for lack of confidence in men to transact their own business.

Talk about the middle men and the commission men taking all the profits! This is the way I treat them: Last fall I drove into a town a few miles distant with a load of honey, and went to the principal dealer in honey and stated my price. Said he: "I can buy just as nice honey as that for 10 cents." "And you retail it for 20 cents do you?" "Yes, and have no trouble to get it." "Well," said I, "you will have trouble in the future." So at the house adjoining his store I commenced selling nice comb honey at 18 cents, and extracted at 12½ cents, or 10 pounds for \$1. I visited this town once a week while my honey lasted, selling on each trip an average of 50 pounds of comb honey, and 450 pounds of extracted. It is needless to say that the sales of honey by middle men in that town was completely ruined.

My crop this season from 70 colonies was 2,000 pounds of comb honey, 5,100 pounds of extracted honey, and \$30 worth of beeswax. About 15 days were spent in selling this honey from a peddling-wagon direct to consumers. The average price obtained was 18 cents for comb, and 12½ cents for extracted honey. By the time all my honey was sold the demand was just booming.

In conclusion I want to say that we will hear no more wails from bee-keepers about dull sales, low prices, and the need of a honey-producers' association, if every one who has honey to sell will go to work, and by a persistent effort sell his honey to his neighbors, and to all within a reasonable marketable distance. Let all pursue this course, and keep it up, and I will guarantee that in less than six months from to-day, they will be offered a paying price for their honey by commission men who will then be willing to pay for space in our newspapers for the privilege of quoting the markets, or be left out.

Holliday's Cove, 3 W. Va.

Local Convention Directory.

1887. *Time and place of Meeting.*
Feb. 23-24.—E. Iowa & W. Ill., at Davenport, Iowa.
J. Wadsworth, Sec., Moline, Ills.
Mar. 3, 4.—Pan-Handle, at Wheeling, W. Va.
W. L. Kinsey, Sec., Blaine, O.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Bee-Keeping in Idaho.—F. H. McDonald, Star, 9 Idaho, on Jan. 31, 1877, writes:

My bees wintered well last winter on the summer stands without any protection. I had one swarm on May 3, and a second swarm on May 13. This winter so far has been favorable. My bees have a flight every week. So far the lowest the mercury has been was 6° above zero, and we have not had an inch of snow at one time, and but very little freezing.

Good Honey-Flow.—Henry Hohnadle, Chadwick, Ills., on Jan. 31, 1887, says:

I put out 30 colonies last spring, 8 of which were very weak, and I increased them to 46. We had a good honey flow, and I secured 2,000 pounds of white clover and basswood honey in 1-pound sections, about 1,000 pounds of fall honey, and have 1,000 pounds of unfinished sections. I sold my comb honey at from 12 to 13 cents in my home market, and 500 pounds of extracted at 10 cents per pound. My bees are in a bee-house in straw hives packed with straw under a shed.

My Experience with Bees.—K. H. Fell, Bloomington, Ill., on Feb. 4, 1887, writes:

I left 30 colonies on the summer stands in the fall of 1884, in what I thought good condition. In the spring of 1885 I had 3 weak ones left. In the fall of 1885 I had increased them to 8 good ones. In the spring of 1886 I found them all right; and during the season I increased them to 26 colonies, which are on the summer stands in good condition, and I took as surplus 600 pounds of comb and extracted honey, about an equal quantity of each; nearly all of which I have sold at 16¢ and 10 cents per pound. I still have considerable surplus to feed and build up my apiary with in the spring.

Benefiting Honey-Producers.—A. L. Leach, Dwight, Ill., says:

I believe that honey producers would be much more benefited than in any other way, by controlling swarming as much as possible, and uniting to ship their honey to a single wholesale dealer in each city, who would be governed by a national committee, and give security to do honest work. Then let each ship what honey he cannot sell at home.

Basswood in Illinois.—J. P. Faurot, Hope, Ill., writes:

I would like to ask the readers of the AMERICAN BEE JOURNAL, whether or not basswood ever yields much honey in the State of Illinois. Mrs. L. Harrison, of Peoria, said in a communication that it did not. I have no means of telling, as I live in a prairie country, but I thought of moving my bees to the timber if the basswood would yield so as to make it pay. My 33 colonies, spring count, yielded 3,300 pounds of white clover comb honey, with an increase of 20 swarms.

Bees Doing Nicely.—P. L. Gibson, Muscatine, Iowa, on Jan. 21, 1887, says:

My bees are doing nicely. They are in a cave with the temperature at 40° to 41° above zero, inside, while it ranges from 10° to 30° below outside. I have 40 colonies, and although I think the cave is a little cool, it is perfectly dry; but my bees are not entirely quiet at that point. I received 40 pounds per colony, spring count; but on account of a dry summer I obtained no fall crop.

Glassed and Unglassed Honey.—B. E. Foster, Utica, N. Y., writes:

I was pleased to see Mr. Crandall's article on glassed and unglassed honey, on page 57. I have kept bees for 10 years, and if I should keep them 50 years no one would find a section of my honey on the market without glass; for if glass is put on clean it makes the honey look better. For my glassed honey I get about 3 cents a pound more than for the unglassed,

because the latter leaks more, and when a case is opened it is all daubed up. I have kept store for 10 years, and the more nice honey I could show on the counter the more I could sell. I never had a complaint about glassed honey. About 14 to 15 cents is the right price for comb honey at wholesale. Extracted honey should never be sold for less than 10 cents per pound. Honey at 6 to 7 cents per pound is cheaper than "black-strap," the cheapest grade of molasses.

Bees Refusing Food.—Geo. W. Plinke, Louisville, Ky., writes thus on Feb. 5, 1887:

I have two colonies wintering in a cellar; the temperature being about 40°. They are very quiet, and seem to be doing well, although they had only about 10 pounds of honey when I put them in the cellar. I gave them liquid honey, but they would not store it away. 1. What was the reason for their not doing so? 2. Would it not be best to raise the temperature in the cellar? 3. Would it be advisable to put them on the summer stands on March 1. 4. If not, would it do to put them out on some warm day, and put them back again in the evening?

[The reason your bees did not take the feed you gave them was because of the too low temperature, and besides this, they had natural stores within reach. I would not raise the temperature or make any changes, nor put the bees out until settled weather, as long as they are quiet, provided they can get at all of the 10 pounds of stores that their combs contained. In the condition you describe, they have stores enough to last until it is due time to put them out, when you can feed them readily. Whether or not they can get at all of their stores depends upon the shape of their hives, narrow, shallow hives with fewer combs are best. If, upon examination, you find they are out of available stores, I think in your latitude your fourth, and last proposition, might be expedient.—JAMES HEDDON.]

Bee-Keeping in Minnesota.—I. W. Rollins, Elgin, Minn., on Feb. 8, 1887, writes:

I have kept bees in a small way for about 10 years, and have increased my apiary from 1 colony to 60. I commenced with the box-hive made of rough boards. I now have 8-frame Langstroth hives, and use two-pound and one-pound sections with wide frames. When I commenced to keep bees there was no white clover, and but little basswood within 5 to 10 miles, and bees had but little to gather honey from except wild flowers, and did rather poorly. There

is a large amount of clover when the winters are favorable, and also a large amount of Alsike, and some buckwheat. From 50 colonies last spring I had 2,200 pounds of comb honey, 1,800 pounds of which was clover, and the remainder from fall flowers and buckwheat.

My Success in Bee-Keeping.—Milo George, Bowling Green, O., on Feb. 9, 1887, says:

I commenced the season of 1886 with 18 colonies, which I transferred from Gallup frames to American frames. I did not get my bees until the last of May, and had the hives and frames to make after that. I put 32 colonies into winter quarters, and they are all right so far. I got about 800 pounds of extracted and 100 pounds of comb honey. My bees are all in chaff hives.

Moving Bees a Long Distance.—John H. Shelt, Spearville, Kans., on Feb. 7, 1887, says:

I came to Kansas last November from Ohio, and carried a small colony of bees with me on the cars, 900 miles, and brought them through all right. They have had two good flights since I have had them here. I keep them in a cave, and they are doing well.

Association for Honey Producers.—James Heddon, Dowagiac, Mich., writes:

I believe that we owe a debt of thanks to Messrs. F. I. Sage & Son (page 71), and Mr. M. M. Baldrige (page 85) for their able articles on the subject of our interests as honey producers. Just compare Mr. Baldrige's article, on page 85, with the report of the decision of the members of the Northern Illinois Convention, as found on page 86, the middle of the last column. The report of their decision occupies three lines, and contains no argument or reasons; Mr. Baldrige occupies three columns, every paragraph of which is brimful of both. Whether or not we can stop a "comet," "corner" the honey market, or accomplish any other desirable purpose, after having held a hundred conventions devoted to the best ways and means to produce more honey in the United States, do you not think that we can profitably hold just one to discuss methods of disposing of it, at a living price, and prevent others from "cornering" us?

Convention Notices.

The annual meeting of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held in Moore's Hall, 110 East 3rd Street, at Davenport, Iowa, on Wednesday and Thursday, Feb. 23 and 24, 1887, commencing at 10 a.m. Bee-keepers and those interested in bee-culture are invited to be present. Those wishing to exhibit bee-fixtures or honey, will please bring the same for inspection. J. WADSWORTH, Sec.

The Pan-Handle Bee-Keepers' Association will meet at Wheeling, W. Va., in the K. of P. Hall, 1138 Main St., on Mar. 3 and 4, 1887. W. L. KINSEY, Sec.



Issued every Wednesday by
THOMAS G. NEWMAN & SON,
 PROPRIETORS,
 923 & 925 WEST MADISON ST., CHICAGO, ILL.
 At One Dollar a Year.

ALFRED H. NEWMAN,
 BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Preserve your Papers for reference. If you have no **HINDER** we will mail you one for 60 cents, or you can have one **FREE** if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

We will Present Webster's Dictionary (pocket edition), and send it by mail, postpaid, for two subscribers with \$2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

One Dollar invested for the weekly visits of the AMERICAN BEE JOURNAL for 1887, will richly repay every apiarist in America.

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Sellers ask from 7 to 10 cts. for anything off in comb honey; this includes dark undesirable and crooked combs, and 2-pound sections. Good 1-lb. sections, 10¢@12¢; choice, 12¢@13¢. No demand for extracted, and very little for comb.
BEE SWAX.—22c. R. A. BURNETT.
 Jan. 19. 161 South Water St.

NEW YORK.

HONEY.—We quote: Fancy white in 1-lb. sections, 10¢@12¢; in 2-lbs., 9¢@10¢; off grades, 1 to 2 cts. per lb. less. Buckwheat, in 1-lb. sections, 8¢@9¢; in 2-lbs., 7¢@7½¢. Extracted, California, 5¢@5½¢; buckwheat, 4¢@4½¢. Supply of comb honey is large, and demand for all kinds is improving.
BEE SWAX.—21¢@23¢.
MCCAUL & HILDRETH BROS.
 Jan. 21. 34 Hudson St.

SAN FRANCISCO.

HONEY.—Extracted is firm at 4¢@4½¢, and comb at 7¢@12¢, per lb.
BEE SWAX.—19¢@21¢.
 Jan. 31. SCHACHT & LEMCKE, 122-124 Davis St.

BOSTON.

HONEY.—1-lb. packages of white clover honey at 13¢@14¢; 2-pounds at 11¢@12¢. Extracted, 5¢@7¢.
BEE SWAX.—24 cts. per lb.
 Jan. 21. BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Few sales are reported. Best white comb, 12½¢; Fall comb honey, 10¢@11¢. Extracted is offered for 6¢@6½¢.
BEE SWAX.—Firm at 23¢.
 Feb. 11. M. H. HUNT, Bell Branch, Mich.

CINCINNATI.

HONEY.—We quote for extracted, 4¢@7¢ per lb. Nice comb brings 12¢@15¢ per lb. in a jobbing way.
BEE SWAX.—Good demand, 20¢@22¢ per lb. for good to choice yellow.
 Jan. 22. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—Choice white, in 1-lb. sections, sells at 13¢; second quality white, 12¢; dark 1-lb., 10¢; white 2-lbs., 11¢@12¢. Extracted, 6¢. Market dull.
BEE SWAX.—25¢.
 Jan. 14. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—We quote choice 1-lb. sections at 12¢@12½¢; 2-lbs., 11¢@12¢. No call for dark. White extracted, in barrels and kegs, 9¢@9½¢; in small packages, 7¢@8¢; dark, in barrels and kegs, 5¢@5½¢.
BEE SWAX.—25¢.
 Jan. 19. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—We quote: Comb, extra white, 12¢@13 cts.; amber to white, 8¢@11¢. Extracted, white, 4¢@4½¢; amber and candied, 3¢@4¢. Trade is quiet.
 Jan. 10. O. B. SMITH & CO., 453 Front St.

KANSAS CITY.

HONEY.—We quote white clover 1-pounds at 12¢; dark 1-lbs., 8¢@10¢; white clover 2-lbs., 10¢@11 cts.; dark 2-lbs., 7¢@9¢. Extracted, white clover, 6¢; dark, 4¢@5¢; white sage, 5¢@5½¢; amber, 4¢@5¢.
BEE SWAX.—20¢@23¢.
 Jan. 13. CLEMONS, CLOON & Co., cor. 4th & Walnut.

ST. LOUIS.

HONEY.—Choice comb, 10¢@12¢; latter price is for choice white clover. Strained, in barrels, 3¢@4½¢. Extra fancy of bright color and in No. 1 packages, 4¢ advance on above prices. Extracted in barrels, 4¢@5¢; in cans, 5¢@6¢. Market dull.
BEE SWAX.—Firm at 21¢ for prime.
 Feb. 3. D. G. TUTT & CO., Commercial St.

By Using the Binder made expressly for this BEE JOURNAL, all can have them bound and ready for examination every day in the year. We have reduced the price to 60 cents, postpaid. Subscription for one year and the binder for \$1.50.

Sample Copies of the BEE JOURNAL will be sent **FREE** upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

System and Success.

All who intend to be systematic in their work in the apiary, should get a copy of the **Apiary Register** and commence to use it, the prices are reduced, as follows:

For 50 colonies (120 pages).....\$1.00
 " 100 colonies (220 pages).....1.25
 " 200 colonies (420 pages).....1.50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

More Premiums.—Mr. L. J. Diehl, of Butler, Ind., offers a colony of Italian bees as a present to the person sending to this office the largest club of subscribers for 1887. The subscriptions may be sent in any time before the first of May at our regular club rates, and additions made as desired, but it must be stated that you are working for that premium, so that we can keep account of the subscriptions.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructible. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us three subscriptions—with \$3.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

The Convention History of America with a full report of the proceedings of the Detroit and Indianapolis conventions, and the AMERICAN BEE JOURNAL for one year, will be clubbed for \$1.25.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two new subscribers besides his own, with \$3.00, for one year, we will present a copy of this valuable book.

Do you Want a Farm Account Book? We have a few left, and make you a very tempting offer. It contains 168 pages, is printed on writing paper, ruled and bound, and the price is \$3. We will club it and the Weekly BEE JOURNAL for a year and give you both for \$2. If you want it sent by mail, add 20 cents for postage.

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for \$1.50.

E. Duncan Sniffen, Advertising Agent, 3 Park Row, New York, inserts advertisements in all first-class Newspapers and Magazines with more promptness and at lower prices than can be obtained elsewhere. He gives special attention to writing and setting up advertisements in the most attractive manner, and guarantees entire satisfaction. In all his dealings, he is honorable and prompt. Send for his Catalogue of first-class advertising mediums. Mailed free. 52A40t

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

Mr. Geo. Pinney established the evergreen business in Sturgeon Bay, Wis., nearly 25 years ago. He now claims to have the only nursery of the kind in the State, and to do a business in that line second to none in America. His advertisement appears in another column.

Advertisements.

WANTED.—Three live men to work in an Apiary and Nursery.
Atf. S. I. FREEBORN, Ithaca, Wis.

PRACTICAL Bee-keeper wanted for four months. Correspondence solicited.
Atf. P. BALDWIN, Independence, Mo.

100 COLONIES of BEES
For sale cheap. Reason, too many.
Atf. H. NEUBAUER, Burlington, Racine Co., Wis.

HOW TO RAISE COMB HONEY.
Price 5 cents. You need this pamphlet, and my free bee and supply circular.
Atf. OLIVER FOSTER, Mt. Vernon, Linn Co., Iowa.

PURE Italians. Tested Queens, June, 1.25 each. 12¢ doz. Full colony & tested queen, June, \$6.
Atf. O. N. BALDWIN, Clarksville, Mo.

FOR SALE.—100 Full Colonies of Italian and Hybrid BEES, in 2-story Standard Langstroth Hives, at \$10 per Colony. Four-fifths of the Combs are drawn out from Foundation in wired frames; all Queens reared under the swarming impulse, except a few superseded in full colonies. With the largest order (not less than 10) I will give an Excelsior Honey-Extractor; with 2nd largest (not less than 5), an Excel. Wax-Extractor and Unclipping-Knife—provided I sell my Bees. Bees shipped as ordered, and in the order they are in receipt. Remit by P. O. Money Order, or Draft on New Orleans. Correspondence & offers solicited.
Atf. Address, W. T. MADDOX, Alexandria, La.

DON'T GET LEFT!—Nothing extends reputation equal to the brilliant Chromo Bee-Card. See page 77, or address,
Atf. J. H. MARTIN, HARTFORD, N. Y.

WANTED.—To confer with a reliable married man who has a good knowledge of Bees, with a view of establishing an apiary near Boston. Address,
Atf. BOX 151, MILTON, MASS.

WANTED.—I cannot give my bees the attention they should have, and I am therefore anxious to obtain the services of a competent, reliable apiarist, to aid me. I want a single man. For further particulars address,
Atf. E. C. JORDAN, JORDAN SPRINGS, Fred Co., Va.

BeeKeepers' Supplies
WHOLESALE & RETAIL
E. T. Lewis TOLEDO OHIO.

All orders filled the day they are received, except for bees and queens. 1D6t

Bee - Keepers' Supplies,

OF ALL KINDS,

ALWAYS ON HAND.

A GREAT REDUCTION IN PRICE.
Send for Price List. Cash paid for Beeswax. A. F. STAUFFER & CO., 33d St. STERLING, ILLS.

BEE-KEEPERS' Guide, Memoranda & Catalogue for 1887 Free. Reduced Prices.—Jos. Nysewander, Des Moines, Iowa. 5D6t

1887.
Queens. BEES. Queens.
MY ITALIAN BEES AND QUEENS cannot be excelled in BEAUTY and WORKING QUALITIES. I make a specialty of Rearing FINE BEES and QUEENS. Prices Reduced for 1887. Be sure to send for my NEW Catalogue before buying. Address Frank A. Eaton, Bluffton, O. 5D6t

200 COLONIES

OF

Choice ITALIAN and ALBINO BEES

FOR SALE AT

GREATLY REDUCED PRICES

Also a full line of

BeeKeepers' Supplies

COMB FOUNDATION from Choice, Select, Yellow BEESWAX a Specialty, at very low rates, both wholesale and retail. Do not fail to send for my 27th Annual Catalogue before purchasing.

Address, WILLIAM W. CARY, Coleraine, Mass.

5D6t Mention this paper when writing.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for \$3.00.

CLOVER SEEDS.

We are now selling Alsike Clover Seed at the following prices: \$8.00 per bushel, \$2.25 per peck, and 25 cents per pound. Also, Melilot or Sweet Clover Seed: \$6.00 per bushel, \$1.75 per peck, and 20 cents per pound, by express or freight. All orders promptly filled upon arrival.

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OLD TIME PRICES!

UNTIL further notice I will accept orders for FOUNDATION as follows—to be shipped in April:

Dunham Brood, per lb. 35c.
Vandervort Thin, per lb. 45c.
All fresh made. Also the best FOUNDATION FASTENER in the market.
WAX worked—Dunham 8 cts. and Vandervort 15 cts. per lb. No Circulars. Seven years experience in the business.
Atf. J. V. CALDWELL, CAMBRIDGE, Henry Co., ILLS.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,
Editor of the American Bee Journal.

It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, \$1.00, postpaid.

A Liberal Discount to Dealers, by the Dozen or Hundred.

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The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for \$1.75.



Bee-Keepers' Supplies

of all kinds kept in stock, at low rates.

THE QUINBY SMOKER a specialty.

Send for Illustrated Price-List
W. E. CLARK,
Successor to L. C. Root,
Oriskany, Oneida Co., N. Y.

Chapman Honey-Plant Seed

(Echinops sphaerocephalus.)

We can supply this seed POST-PAID at the following prices: One-half ounce, 50 cents; 1 ounce, \$1; 2 ounces, \$1.50; 4 ounces, \$2; 1/4 pound, \$3; 1 pound, \$5. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

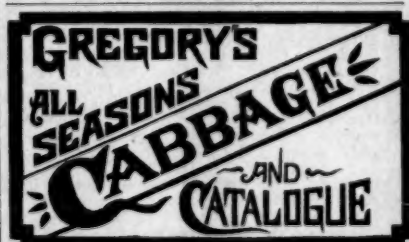
THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf. J. VANDERVORT, Laceyville, Pa.

APIARY for SALE.

90 COLONIES of Italian and Hybrid Bees in Langstroth wired frames, at \$4.00 each. Also GIVEN PRESS. White clover and basswood range, and no other bees near. Reason for selling—I have finished my law studies and am going West.
Atf. GEO. H. SHIBLEY, Richmond, Ill.



My vegetable and flower seed catalogue will be sent free to all who write for it. It is full of fine engravings, with over forty of the best of all the new vegetables. It contains among its vast variety a larger number of home grown seeds, I have reason to believe, than can be found in any other catalogue published in this country. Farmers who make money from valuable new vegetables are those who, being the first to raise them, get a monopoly of their markets. Such will plant largely of this king of all the early drumheads, the All-Seasons Cabbage; for, my friends, it has come to stay! JAMES J. H. GREGORY, Marblehead, Mass.

